



BLS / ALS Industrial Field Medical Protocols

**June 2025
Version 4**



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(Includes Amendments to AHS Protocols)

The *AMS Industrial BLS/ALS Field Medical Protocols* are designed to address urgent/emergent medical conditions that the industrial healthcare provider may encounter in their working environment. All primary care medical conditions that are not considered to be urgent/emergent the industrial healthcare provider should consult the *AMS Industrial Clinical Practice Guidelines (CPG)* for assessment and treatment recommendations.

All patients require consultation with the Most Responsible Physician. However, this may not always be possible in the remote environment. The industrial healthcare provider may practice to the extent of their licensure and in accordance with the *AHS Medical Control Protocols (Adult)* when communication with the Medical Director is not possible and lifesaving interventions are required.

Within Canada, industrial healthcare providers hold different territorial or provincial licenses with varying designations and skill sets. AMS has adopted the *AHS Medical Control Protocols (Adult)* and as such any AMS industrial healthcare provider employed by the Company shall receive bridge training to the Alberta standards. The following territorial or provincial licenses are considered interchangeable within the document:

- AHS Emergency Medical Responder (EMR) = Emergency Medical Responder (EMR)
- AHS Emergency Medical Technician (EMT) = Primary Care Paramedic (PCP)
- AHS Emergency Medical Technician – Paramedic (EMT-P) = Advanced Care Paramedic (ACP)

*** Physician Assistants (PA) will adhere to all protocols where indicated for AHS EMT-P.

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1.0 Delegation of Authority and Medical Control

This set of protocols titled “*AMS Industrial BLS/ALS Field Medical Protocols – April 2015 Revision*” is intended to provide AMS industrial healthcare providers with a comprehensive, up to date, algorithmically based approach to urgent/emergent medical situations. The companion source, *AMS Clinical Practice Guidelines (CPG)*, is a publication that addresses the non-urgent and routine clinical cases found in primary care conditions. The protocols within are to be used in conjunction with the *AHS Medical Control Protocols (Adult)* 2014. Any protocols found within this document supersede the *AHS Medical Control Protocols* unless otherwise specified.

AMS Industrial Medical Providers function in an expanded scope of practice and are reliant on the delegated authority and medical control of the Medical Director to perform this expanded range of interventions and administration of medications.

AMS Industrial Medical Providers require certification to use these Medical Protocols. After reviewing credentials and ensuring that personnel are familiar with the protocols and with AMS procedures, this certification is provided by the Medical Director. Certification is reviewed every two years.

Regardless of this delegated authority, it is expected that AMS industrial healthcare providers operate within their level of training and their personal comfort, experience, and competency. Patient safety is paramount and the overriding expectation is that we do nothing to worsen a clinical situation or to harm our clients.

However, no set of medical control protocols can provide direction in all clinical circumstances nor can it replace good judgment and hands-on decision-making. Sound clinical judgment in an urgent situation will be supported should an industrial healthcare providers perform outside the medical control protocols.

When conditions do not allow for the strict adherence to these guidelines Medical Director guidance should be sought. If this is impossible due to the urgency of the patient's condition or due to technical problems, intentional deviations from protocol must be clearly documented with rationale and the Medical Director must be informed as soon as reasonably possible. AMS provides comprehensive Medical Director – Field Staff are encouraged to use this resource liberally.

Medical Director is available 24/7/365 via telephone for urgent consultation and via e-mail for non-urgent questions. Your local receiving facility Emergency Department is also available 24/7/365 as a back up.

The AMS Industrial BLS/ALS Field Medical Protocols include numerous mentions of situations in which Medical Control must be contacted. In addition to these, the list below outlines situations in which Medical Control **must** be consulted / informed in a timely manner:

Any critical intervention including:

1. Advanced Airway Interventions
 - Oral, nasal, or supraglottic airways
 - Positive pressure ventilation / BVM
 - Intubation
2. Advanced Cardiac Interventions
 - AED
 - Manual & Semi-Automated Defibrillation
 - Cardioversion
 - Cardiopulmonary Resuscitation (CPR)
3. Use of ALS medication as outlined in the AHS BLS/ALS Medical Control Protocols 2014.
4. Prior to initiation of any oral or IV antibiotics
5. If a client is unable to work due to illness or injury and is off work for a full shift or more
6. If a client is evacuated offsite for an injury and/or illness via routine charter or medevac.
7. Any adverse effects from medication administration.

2.0 General Principles

2.1 Patient Autonomy

As medical professionals our primary goal is to provide the highest level of patient care possible. It is important that the patient retains decision-making rights over their own assessments and treatments by a healthcare provider. The patient may refuse assessment and treatment except in situations that apply under the Mental Health Act and the Public Health Act. Patients have the right to be informed of what assessments and treatments require to be performed and all potential risk and benefits of a treatment.

2.2 Employee Safety

AMS is dedicated to ensuring employee safety. It is important to keep your own personal safety in mind while performing the duties of your job. This can be difficult when responding to an emergency. Please remember dead or injured emergency responders are unable to help anyone. Emergency response duties are inherently dangerous. It is important to use the established safety measures to reduce your chances of becoming ill or injured and to always keep your personal safety in the forefront of your mind. If you encounter a situation that is beyond the usual risk of the job, employees are expected to utilize whatever resources are required to reduce the risk to an acceptable level. This may sometimes require us to wait for other personnel to arrive before attending to the patient.

2.3 Patient Safety

Advanced Medical Solutions is dedicated to ensuring a safe environment for their patients. Any patient safety incidents such as a medication error, an adverse reaction to a medication, aggravation of an injury during treatment will be reported to the Industrial Operations Manager and Medical Director.

2.4 Protective Equipment and Universal Precautions

Universal precautions are designed to protect both the client and the caregiver. AMS industrial healthcare providers are required to utilize universal precautions such as gloves, masks, sterile technique, and safe sharps handling and disposal as appropriate. N95 masks will be stocked on site in the event they are required for respiratory protection. Depending on the situation, employees may also utilize gowns, masks, helmets, ear protection, and cold weather protection gear. Anytime an employee is working on or near a roadway or other traffic area, reflective vests and/or clothing must be worn, and all emergency and hazard lights on vehicles must be activated. All entry requirements for industrial sites must be followed. Industrial healthcare providers must not wear or utilize any safety apparel or equipment where training and competency has not been demonstrated and confirmed. Please refer to Appendix B of this document for the selection of appropriate level of PPE.

2.5 Patient Assessment

Our clients should be treated with respect and their privacy and confidentiality guarded. A complete physical and focused assessment will be completed on every client.

The clinic space is to be stocked with all primary assessment tools including stethoscope, thermometer, pulse oximeter, otoscope, ophthalmoscope, flashlight, ability to measure height and weight, urine dip sticks, and glucometer, and AED.

2.6 Record Keeping

Records should be thorough, accurate, and maintained in a locked secure area accessible only to medical staff. The basic essentials of a patient care record include the presenting complaint, the history of present illness, past medical history, allergies, medications, objective findings including vital signs and physical exam, impression, and management plan. All interventions, phone consults, and medications and physician orders/directives should be recorded. When administering interventions or medications, reference should be made to the name of the protocol that you are following or the name of the physician whose instructions you are following.

2.7 Medication Administrations and Storage

Narcotic storage and record keeping will be conducted as per company policy. All industrial healthcare providers are responsible for ensuring that all drugs on the approved drug list are stocked and are available on site at no less than the minimum quantities specified. Drugs not on the approved drug list are not to be stocked nor administered by industrial healthcare providers.

A number of medications appear on the master drug list but not in the protocols. For example, many antibiotics and some critical care medications such as dopamine and phenytoin. These drugs are to be given only after receiving verbal orders from Medical Director or the receiving physician.

Medication should only be administered if a clear indication exists and only after it is ensured that no allergy or other contraindication is present. It is prudent to start with a small dose and titrate upwards. It is also prudent to observe the patient after the first dose of a new medication is given. IV medication should be administered slowly and the patient closely observed for at least 30 minutes after the first administration. The dose and time of medication administration should be recorded on the care record.

Any medication adverse effects must be reported to the Medical Director.

2.8 Sharing of Confidential Information

Medical information is strictly confidential. AMS operates in industrial sites and therefore has a relationship with the site owner/operator. It is essential that patient confidentiality be respected in this environment.

In the case of non-occupational injuries and/or illnesses, only very limited information should be shared with the employer. This will typically include only communicating work restrictions and plan for reassessment only. The diagnosis and other details should not be shared without the patient's explicit consent.

In the case of work related injury or other work related conditions, it may be necessary to share more information. In addition to work restrictions, this may include the nature of the injury, how it occurred, and the management plan. Information not directly related to the injury or to site safety should not be disclosed.

Under certain circumstances client information might be required by law by the workers compensation board, public health department, or other government or judicial agency. Always seek permission from the Industrial Operations Manager prior to sharing any patient care information and ensure appropriate permission has been obtained by the client.

When transferring care or seeking consultation, it may be necessary to fax patient records or ECGs to the receiving physician or facility.

In non-emergent situations, written consent must be sought from the client prior forwarding patient records or disclosing information to other caregivers or parties.

2.9 Transfer of Care Guidelines

Some situations require the transfer of care of a patient from AMS industrial healthcare provider(s) to other health care professionals such as air medical staff. It is incumbent upon the staff handing off a patient to ensure that the individuals who are receiving the patient are able to provide the care needed. If this is not possible it may be necessary in certain circumstances for the AMS staff to accompany the patient during transport. It is important to explore this possibility before such an event should arise so that contingency plans can be made with all involved parties.

2.10 Local Resources and Disaster Planning

AMS industrial healthcare providers are required to be aware of the local medical and transport resources. These resources include nearest medical clinics, hospitals, ground and/or air ambulance, charters services, and routes. Contact information and procedures to access those should also be available to the industrial healthcare provider and posted in readily accessible area.

2.11 Legislation and Regulations

Staff are required to be registered in good standing with their relevant professional College. AMS and its staff will comply with all applicable legislation and regulations in the jurisdictions in which it operates including relevant workers compensation board regulations and reporting requirements.

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Endorsement:



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01 April 2015

Date

TITLE:	Utilization of AMS Industrial BLS/ALS Field Medical Protocols and AHS Medical Control Protocols		
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PURPOSE:

This document provides the guidelines for use of the Advanced Medical Solutions Medical Control Protocols (AMS MCP) and the Alberta Health Services Medical Control Protocols (AHS MCP).

SCOPE:

This SOP applies to all Industrial healthcare providers, Industrial Operations Manager and the AMS Medical Director.

RESPONSIBILITIES:

Advanced Medical Solutions (AMS) has adopted the Alberta Health Services (AHS) Medical Control Protocols.

These protocols are provided in two sections:

1. Medical Control Protocols (Adult) – Approved
2. Medical Control Protocols (Paediatric) – Not approved
3. Critical Care Protocols – Not Approved (exception for Methanol/Ethylene Glycol Poisoning)

These protocols are maintained in the Alberta Health Services iPhone App and the Alberta Health Services cloud based server. The App is automatically updated on cell phones and tablets.

The AMS Industrial BLS/ALS Field Medical Protocols have been developed to provide specific clarification and guidance for industrial healthcare providers. These guidelines are in a PDF document on every company provided cell phone, tablet and on the AMS Academy website including a paper copy in each BLS/ALS kit.

***** Note - The AMS Industrial BLS/ALS Field Medical Protocols supersede the AHS Medical Control Protocols (Adult) *****

Industrial healthcare providers will review the AMS Industrial BLS/ALS Field Medical for direction **before** utilizing AHS Medical Control Protocols (Adult).

PROCEDURES:

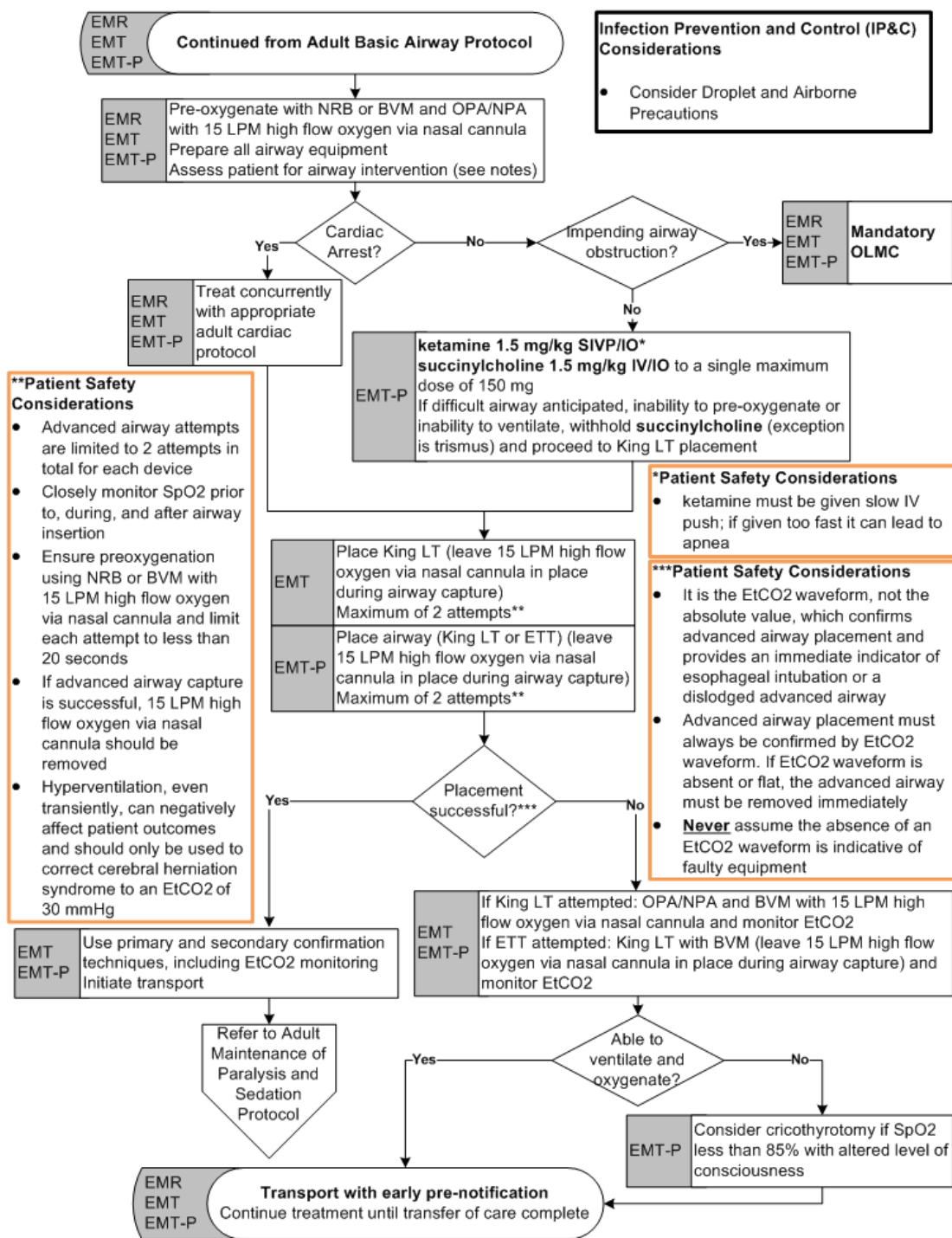
1. Review the AMS MCP section "Consulting with The Most Responsible Physician (MRP)" in preparation for any transport.
2. Review the AMS MCP sections appropriate to the patients care plan. The AMS MCP supersedes the AHS MCP.
3. Review the AHS MCP section appropriate to the patients care plan.
4. Consult both the AMS and AHS MCP on each transport before formulating your plan of care.
5. Once your plan of care is formulated utilizing the AMS & AHS MCPs, discuss this plan of care with the MRP.
6. The MRP may provide orders outside of the AMS or AHS Protocols. AMS Industrial Healthcare Providers may follow these orders when:
 - The orders fall within the scope of practice of the AMS Industrial Healthcare Provider
 - The AMS Industrial Healthcare Provider has the knowledge, experience and ability to complete the orders

*****If the AMS Industrial Healthcare Provider is unclear regarding any orders or MCPs, they should consult with the AMS Medical Director immediately*****

REQUIRED DOCUMENTS:

1. Advanced Medical Solutions Medical Control Protocols
2. Alberta Health Services Medical Control Protocols
3. Alberta Health Services Critical Care Protocols

Amendment to AHS Medical Control Protocol Adult Airway (Advanced)



INDUSTRIAL EMT-P OR PA WILL MAKE ALL ATTEMPTS TO CONTACT THE MRP PRIOR TO PERFORMING AN RSI.

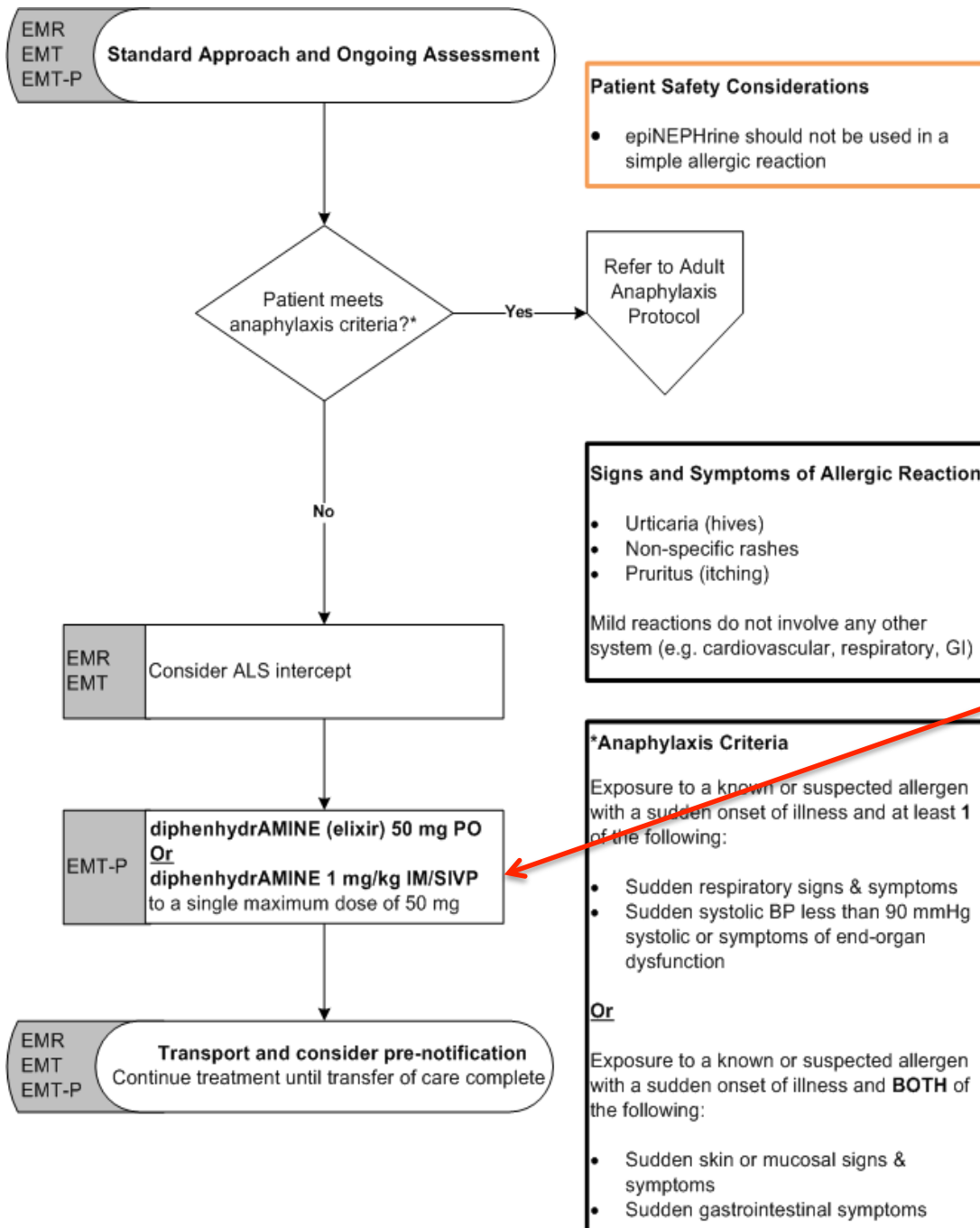
- If the patient's condition warrants immediate action the EMT-P or PA can utilize the RSI protocol but will contact the MRP once the patient is stabilized

Use Alternate Airway if required:

- King LT-D as first choice for adults due to ability to decompress the stomach
- Ensure cuff pressures and EtCO₂ are monitored.
- LMA is an excellent choice for small pediatrics or if King LT-D fails in adults.
- Do not remove** King LT-D to replace with an ET tube if effective ventilation is achieved.

Refer to *Maintain Sedation and Paralysis* MCP once airway is secured.

Amendment to AHS Medical Control Protocol Allergic Reaction (Adult)



EMT or PCP may administer Diphenhydramine 50-mg PO if no contraindications exist.

Amendment to AHS Medical Control Protocol Bronchospasm (Adult)

Patient Safety Considerations*

- Do not administer oral predniSONE to patients presenting with severe shortness of breath or difficulty swallowing; IV steroids should be given instead
- IV/IO dexamethasone is not compatible when administered concurrently with magnesium sulfate. Either initiate a second IV line or ensure the existing IV line is flushed completely

Patient Safety Considerations**

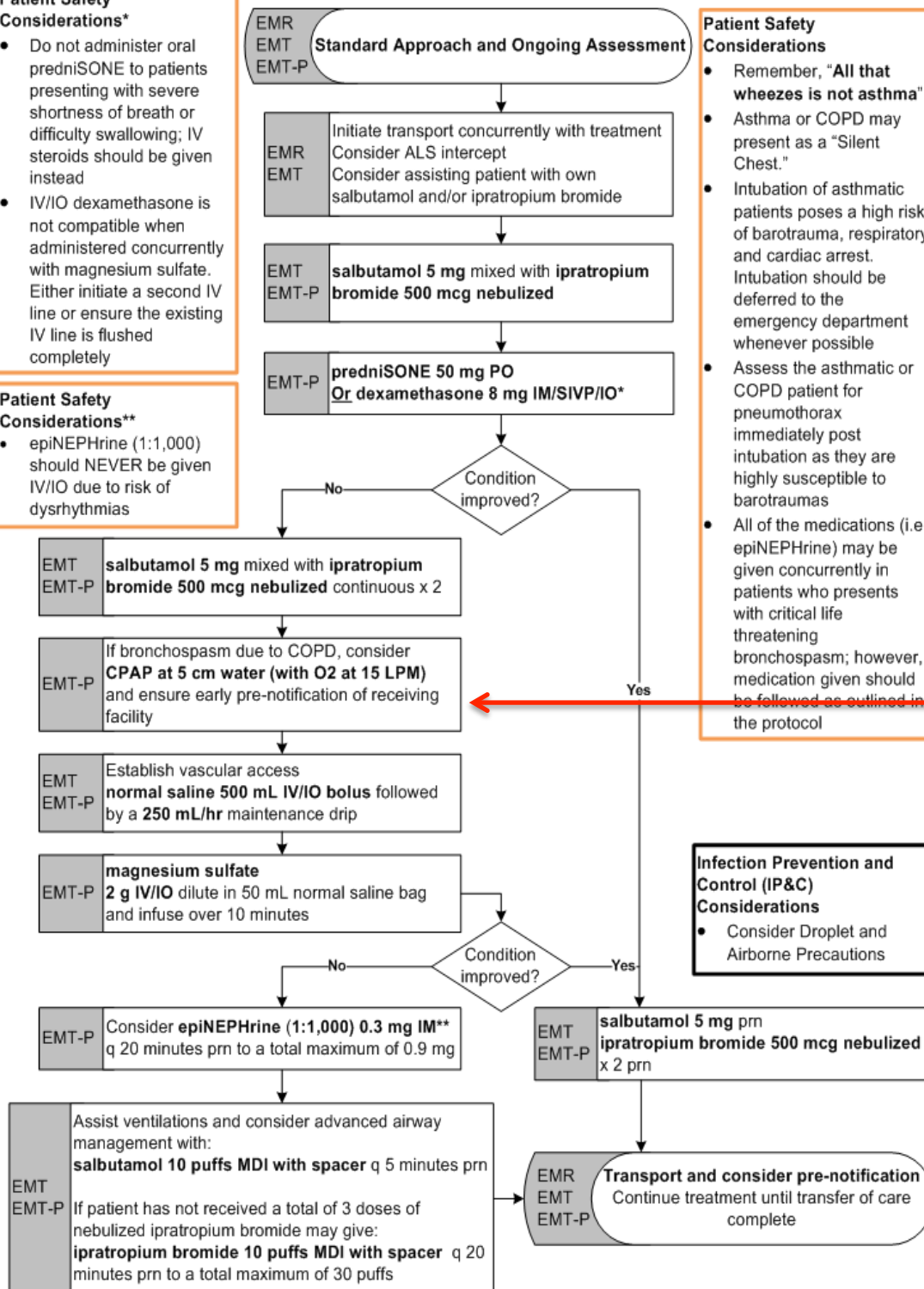
- epiNEPHrine (1:1,000) should NEVER be given IV/IO due to risk of dysrhythmias

Patient Safety Considerations

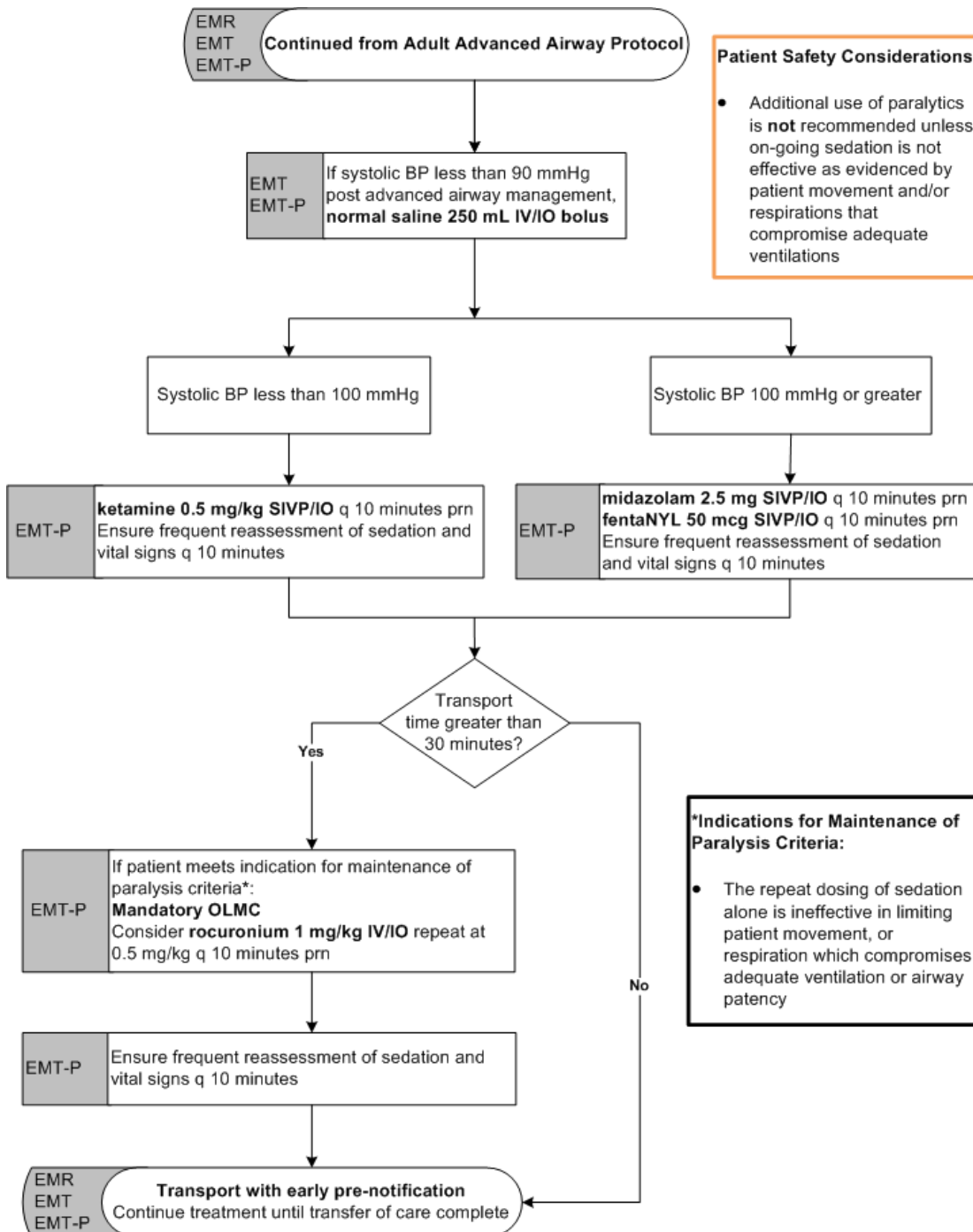
- Remember, "All that wheezes is not asthma"
- Asthma or COPD may present as a "Silent Chest."
- Intubation of asthmatic patients poses a high risk of barotrauma, respiratory and cardiac arrest. Intubation should be deferred to the emergency department whenever possible
- Assess the asthmatic or COPD patient for pneumothorax immediately post intubation as they are highly susceptible to barotraumas
- All of the medications (i.e. epiNEPHrine) may be given concurrently in patients who presents with critical life threatening bronchospasm; however, medication given should be followed as outlined in the protocol

AMS Does Not Utilize CPAP on Industrial Sites Due to prolonged medical Evacuation.

Use Advanced Airway - Adult if Required



Amendment to AHS Medical Control Protocol Maintenance of Paralysis and Sedation (Adult)



Patient Safety Considerations

- Additional use of paralytics is **not** recommended unless on-going sedation is not effective as evidenced by patient movement and/or respirations that compromise adequate ventilations

- All vented intubated patients **must have sedation and analgesia infusions** during transport.

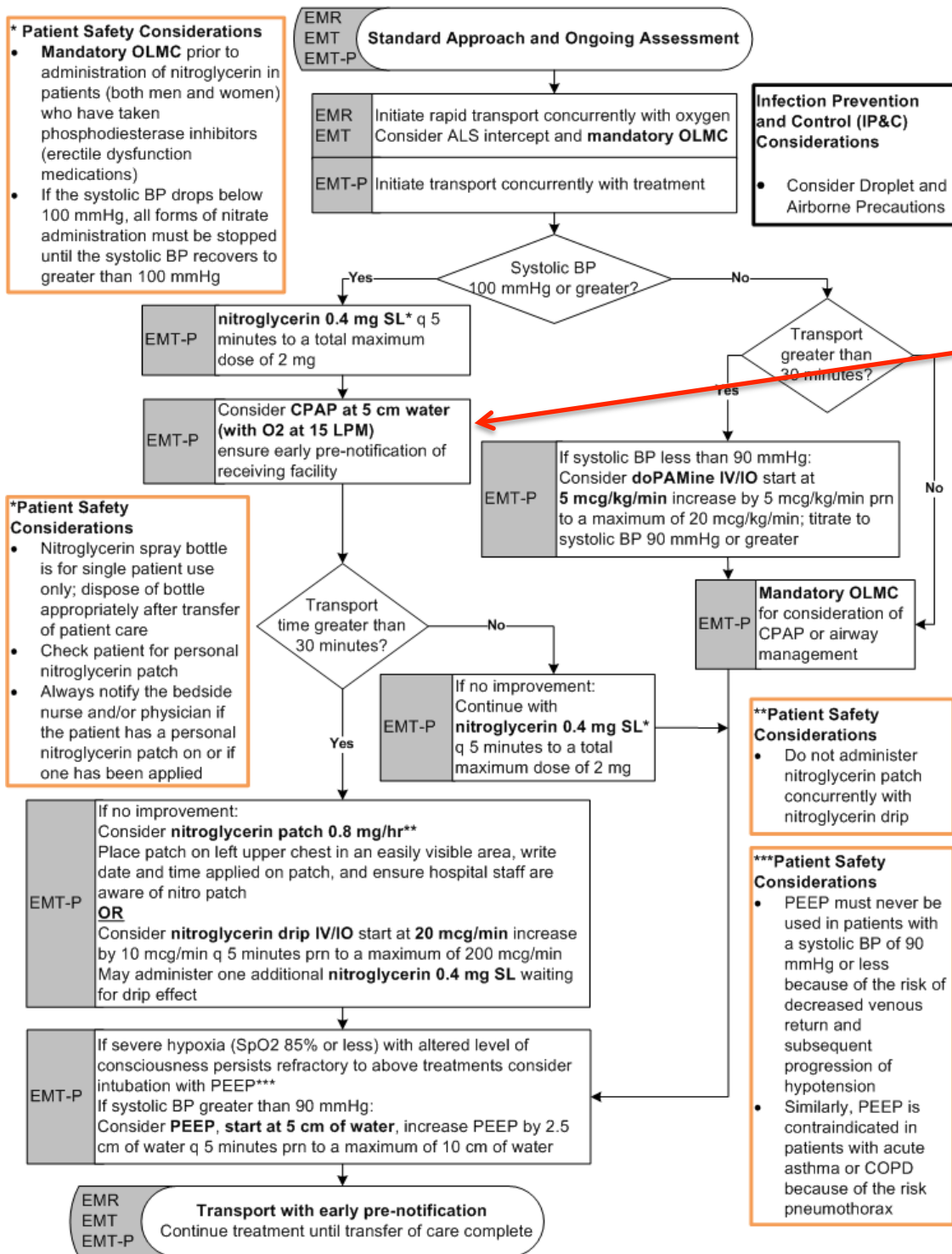
- If sedation or analgesia is inadequate, administer an IV bolus to provide breakthrough analgesia/sedation and then increase the infusion.

- Inotropic medication may need to be added to support hemodynamics

- Soft restraints will be applied to **all** patients with an advanced airway.

- At no point should a patient have only a paralytic without sedation and analgesia.

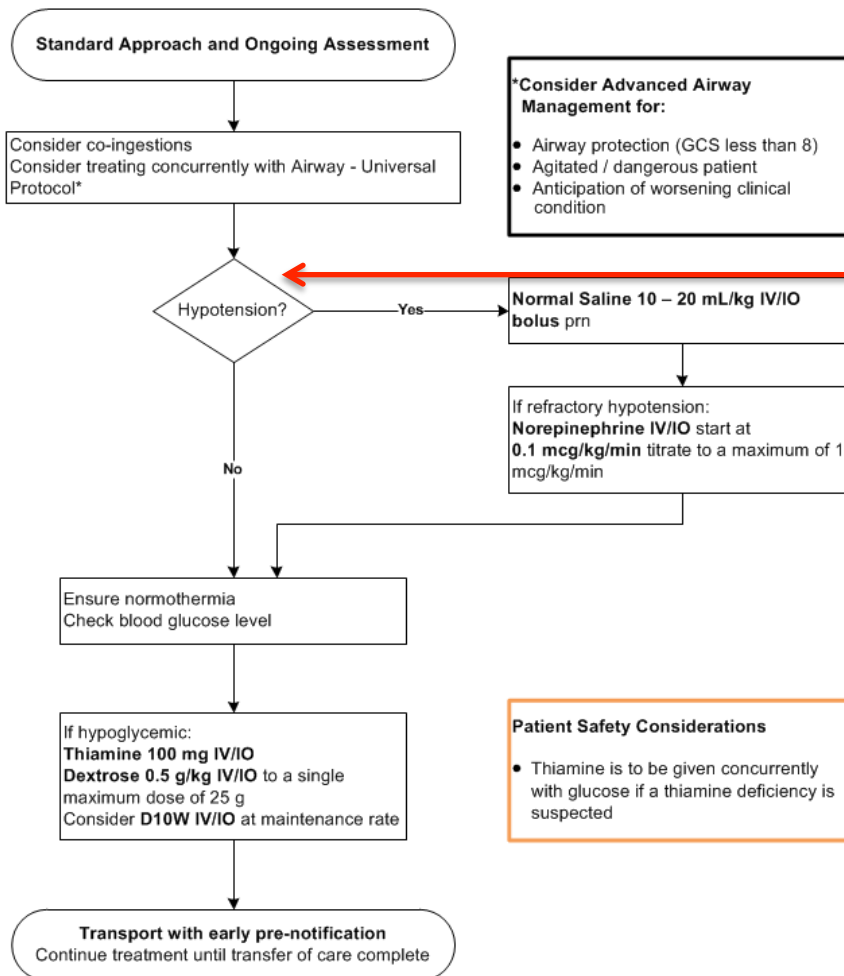
Amendment to AHS Medical Control Protocol Pulmonary Edema



AMS does not utilize CPAP on industrial sites due to prolonged medical evacuation.

Use Advanced Airway (Adult) if required.

Amendment to AHS Medical Control Protocol Methanol/Ethylene Glycol



- Treat hypotension with intravenous crystalloid, followed by standard vasopressors as necessary
- Block alcohol dehydrogenase with **fomepizole**, 15 mg/kg IV loading dose, followed by 10 mg/kg q 12 h x 4 doses. If patient requires further treatment after this regimen, increase dose to 15 mg/kg every 12 hours
- If fomepizole is unavailable or patient has a known allergy, block alcohol dehydrogenase with ethanol, 10 mL/kg of a 10 percent ethanol solution, followed by 1 mL/kg of 10 percent ethanol solution infused per hour. Titrate to serum ethanol concentration of 100 mg/dL.
- Administer **sodium bicarbonate**, 1 to 2 meq/kg bolus followed by infusion of 132 meq NaHCO₃ in 1 L D5W to run at 200 to 250 mL/hour for patients with pH below 7.3
- For patients with known or suspected methanol poisoning, administer **folic acid**, 50 mg IV every six hours
- For patients with known or suspected ethylene glycol poisoning, administer **thiamine**, 100 mg IV, and administer **pyridoxine**, 50 mg IV
- If the diagnosis is uncertain but clinical suspicion is high, the clinician should initiate antidotal treatment with alcohol dehydrogenase blockade and consultation for hemodialysis

AMS AMENDMENT TO THE HYDROFLUORIC ACID CONTAMINATION PROTOCOL

AMS AMENDED PROTOCOL

Standard Approach and Ongoing Assessment Do Not Enter the Hot/Red or Warm/Yellow Zone

Emergency Response Team to decontaminate patient as required (see notes¹)

Exposure to Hydrofluoric Acid?

Yes

Eye exposure

Irrigate with water Or normal saline for a minimum of 20 minutes Or until Morgan Lens is inserted

Administer **tetracaine 1-3 drops per eye**, repeat once in 30 minutes

Insert Morgan Lens and irrigate with lactated ringers Or instill 1% calcium gluconate

Skin exposure

Irrigate with copious amounts of water Or normal saline

Burns Or painful area treat with **30g calcium gluconate 2.5% topical gel** to affected area

Inhalation exposure

Administer oxygen

Calcium gluconate 10% nebulized 150mg
Mix 1.5cc (150mg) of calcium gluconate 10% with 3.5cc of normal saline

Seizure Or Dysrhythmia* Or Significant exposure**?

Yes

Calcium gluconate 3g IV/IO dilute in 50mL normal saline infused over 30 minutes repeat once
Magnesium sulfate 2g IV/IO dilute in 50mL normal saline infused over 5 minutes

No

Airway management required?

Yes

Treat concurrently with appropriate Medical Control Protocol Or AMS Amended Protocol

No

Anxiety present?

Yes

No

Continue treatment as per physician orders Or until transfer of care complete

Patient Safety Considerations

- Contact poison control and consult online medical control as soon as possible.
- iStat monitoring of Calcium (Chem 8+) if possible.
- In the setting of inhaled fumes, pulmonary edema is common. Consider CPAP or PEEP.
- Succinylcholine administration should be avoided due to the risk of electrolyte imbalance.
- Remove contact lenses prior to treatment if easily removed or not adhering to the eye.
- Continuous cardiac monitoring and serial 12-lead ECGs should be performed.

*Symptoms of a dysrhythmia:

- Hypocalcemia: prolonged QT interval
- Hyperkalemia: peaked T waves, widened QRS, sinusoidal rhythm
- If cardiac arrest occurs, consider administration of calcium gluconate, magnesium sulfate, and sodium bicarbonate

**Signs of significant exposure:

- Total body surface area greater than 1% skin exposure to a greater than 50% concentration of hydrofluoric acid.

AMS AMENDMENT TO THE HYDROFLUORIC ACID CONTAMINATION PROTOCOL

AMS AMENDED HYDROFLUORIC ACID CONTAMINATION PROTOCOL NOTES

Objectives

- To recognize patients who have been exposed to hydrofluoric acid
- To treat patients symptomatic for eye, skin, and/or inhalation contamination by hydrofluoric acid in a potentially hazardous environment.

Etiology

Hydrofluoric acid is a lipid soluble molecule that absorbs rapidly. It is miscible in water and exists as a gas at room temperature and pressure. Its boiling point is 19.5°C and becomes a fuming liquid below 19.5°C. Hydrofluoric acid is the strongest inorganic acid known. Injury is twofold; causes corrosive burning of the eyes, mucosal, skin and deep underlying tissue. Systemically it binds with calcium and magnesium of the nerve pathways, bone, and bloodstream causing hypocalcemia, hypomagnesemia, and hyperkalemia. This triggers spontaneous depolarization of cells producing excruciating pain and can cause hypotension, involuntary muscle contractions, seizures, cardiac dysrhythmias degenerating to cardiac arrest. Contamination by any route may result in these systemic effects.

Onset and severity of symptoms are related to the concentration of the hydrofluoric acid:

- Patients may suffer from considerable pain that is typically is described as deep, burning, or throbbing. Pain often is disproportionate to apparent skin involvement.
- Consider further administration of topical Calcium gluconate along with Calcium gluconate infusion to manage pain as it is indicative of the ongoing effects of contamination.
- Solutions of 50% and higher concentrations immediately produce symptoms.
- Solutions of 10 - 50% may take 0.5 to 6 hour to produce symptoms.
- Solutions of less than 10% may take 6 to 24 hours before onset of symptoms, resulting in delayed presentation, deeper penetration of the undissociated hydrofluoric acid, and a more severe burn.
- Concentrated solutions cause immediate pain and produce surface burns similar to those produced by other common acids (eg, erythema, blistering, necrosis).

Common Signs and Symptoms of Hydrofluoric Acid Contamination

- | | |
|------------------------|------------------------|
| •Coughing | •Agitation |
| •Airway burning | •Anxiety |
| •Dyspnea | •Confusion |
| •Laryngospasm | •Decreased LOC |
| •Bronchospasm | •Tetany |
| •Pulmonary edema | •Seizure |
| •Stridor | •Coma |
| •Hypoxia | •Severe pain |
| •Hypovolemia (late) | •Nausea |
| •Chest pain | •Vomiting (hemoptysis) |
| •Prolonged QT interval | •Erythema |
| •PVC's | •Blistering |
| •Torsades de pointes | |

¹Interventions:

Do not enter the hot/red or warm/yellow zone. Collaborate with the Emergency Response Team to ensure the appropriate decontamination has occurred prior to patient contact. Decontamination priorities include:

1. Rapidly decontaminate patient by removing contaminated clothing and jewelry, etc. Irrigate with copious amounts of water containing and collecting runoff.
2. Break hydrofluoric acid burn blisters because the blister usually contains hydrofluoric acid.
3. In situations with multiple patients, irrigate for a minimum of 3 minutes. Irrigation for 15 minutes is preferable.
4. Avoid placing patient in a tub as it may expose uninjured areas to the corrosive.
5. Irrigate contaminated eyes for a minimum of 20 minutes on scene. The use of a Morgan Lens with lactated Ringers solution is optimal for continuous irrigation until conjunctival sac pH of 7 is restored.

Special Circumstances

Ensure appropriate PPE is donned and doffed properly to ensure the practitioner is not contaminated and avoid secondary contamination.

Patient Safety Considerations

- Contact poison control and consult online medical control as soon as possible.
- iStat monitoring of Calcium (Chem 8+) if possible.
- In the setting of inhaled fumes, pulmonary edema is common. Consider CPAP or PEEP.
- Succinylcholine administration should be avoided due to the risk of electrolyte imbalance.
- Remove contact lenses prior to treatment if easily removed or not adhering to the eye.
- Continuous cardiac monitoring and serial 12-lead ECGs should be performed.



AMS AMENDMENT TO THE HYDROFLUORIC ACID CONTAMINATION PROTOCOL

(AMS AMENDED HYDROFLUORIC ACID CONTAMINATION PROTOCOL PHARMACOLOGY)

calcium gluconate

Class	Indications
Calcium replacement	Dysrhythmia, seizure, significant exposure to hydrofluoric acid
Adult dosage	3g IV/IO over 30 minutes
Repeat	Once
Contraindications	Hypersensitivity to calcium gluconate or excipients

calcium gluconate

Class	Indications
Calcium replacement	Eye/skin/inhalation hydrofluoric acid contamination
Adult dosage	For contaminated eyes: remove 10mL from a 100mL bag of normal saline and replace with 10mL (1g) of 10% calcium gluconate and instill into eyes using Morgan Lens at 50mL/hr (15gtts/min). For contaminated skin: use of a commercially prepared 2.5% gel or mix 20mL (2g) of 10% calcium gluconate in 56g of Muko jelly (16 x 3.5g sachets) to make 2.5% calcium gluconate and apply 30g to contaminated skin. • Apply to skin and cover with dressing • Re-apply q 15 mins to manage pain and ongoing effects For respiratory injury: mix 1.5mL (150mg) of 10% calcium gluconate solution with 3.5mL of normal saline and nebulize.
Repeat	PRN. Ensure consult with MRP includes topical application of gel and/or eye flushing treatment plan as required.
Contraindications	Hypersensitivity to calcium gluconate or excipients

magnesium sulfate

Class	Indications
Electrolyte	hydrofluoric acid contamination
Adult dosage	2g IV/IO dilute in 50mL normal saline and infuse over 5 minutes
Contraindications	• Any degree of heart block • Renal failure
Notes	Monitor for respiratory depression

tetracaine

Class	Indications
Local anesthetic	Local eye pain relief caused by a foreign body, substance, pepper spray, or corneal abrasion
Adult dosage	1-3 drops per eye
Repeat	Repeat q30 minutes
Contraindications	Hypersensitivity to tetracaine or other ester-type local anesthetics
Notes	• May cause blurred vision • Do not use cloudy, discoloured, or crystallized solutions

Appendix A – Patient Care Documentation

Patient care documentation includes patient history, physical assessment of all anatomical systems, treatments, laboratory, and ongoing system and treatment reviews.

Initial Assessment:

1. Document name, age, weight, sex, destination, sending/receiving physician, presenting problem, current vital signs, mechanism of injury/history of presenting problem, medical history, special requirements, allergies, medications
2. Document time of patient assessment
3. Document initial vital signs and GCS
4. Document treatments, labs and medications
5. Document complete initial assessment including full primary and secondary survey as well as focused assessment regarding patient complaint (see below)
6. Document on trauma diagram location of injury/burn as appropriate
7. Document PR, QRS, and QTc intervals as well as ST/T wave changes and overall interpretation on all ECGs

Continuation of Care:

1. Document that an initial assessment was completed.
2. Document infection prevention/control methods implemented
3. Document time of patient transport to aircraft, how transported, patient condition enroute (if escorting)
4. Document time patient loaded in to aircraft, how patient secured in aircraft, patient condition (if escorting)
5. Document a complete set of vital signs including GCS every 30 minutes or every 15 minutes if patient unstable
6. Document in narrative form every 30 minutes including descriptor of patient status, treatments, and pertinent changes from initial assessment (not just vital signs)
7. Document medications given including time, drug, route, and dosage
8. Document any arrhythmias and obtains rhythm strip

Physical Examination

CVS:

- Level of consciousness, dizziness, lightheaded, headache, fatigue
- Skin color
- Elevated/depressed JVP
- Heart sounds, clear, muffled, extra sounds, murmur, location
- Cardiac rhythm and rate, apical equal to radial, correlates with rhythm strip, ectopy
- Chest pain OPQRST, associated with shortness of breath, diaphoresis, nausea
- Palpitations
- EKG, PR, QRS, QTc intervals, ST/T wave changes, axis deviation, MI localization
- Pulses, central vs peripheral, quality, equal bilaterally
- Temperature, diaphoresis
- Capillary refill time, central vs peripheral
- Edema
- Intake, Output
- Blood pressure, NIBP correlates with IBP
- Pacemaker settings
- IV location, size, patency

RESP:

- Level of consciousness, anxiety, fatigue
- Color of skin, mucous membranes, nail beds
- Patients position of comfort, tripod
- MOANS, RODS, LEMON
- Airway and oxygen adjuncts in place OPA, NPA, NRB, BVM, NC

- ETT/LMA size, position, cuff pressure, suction
- Rate, SpO₂, O₂ administration, EtCO₂, ABG/VBG
- Pattern of respirations, Cheyne-Stokes, agonal, Kussmaul
- Audible wheezes, stridor, grunting
- Nasal flaring, gasping
- Ability to manage own secretions, dysphagia
- Tracheal deviation, JVD
- Work of breathing, accessory muscle use and location, in drawing/retractions location, paradoxical respirations
- Bilateral chest expansion, flail segment, splinting
- DCAP-BLS TIC, subcutaneous emphysema
- Forced/prolonged expiratory time, pursed lip breathing, barrel chest
- Breath sounds and adventitia on auscultation, inspiratory vs expiratory
- Cough, URTI symptoms
- Clubbing

CNS:

- GCS and breakdown of E, V, M
- DCAP-BLS TIC
- Pupil size and response, extraocular movements
- Raccoon eyes, battle signs, otorrhea, rhinorrhea
- Speech changes, visual changes, facial asymmetry
- Cranial nerve assessment (As appropriate)
- Presence of headache, neck stiffness, photophobia, fever
- Spinal immobilization, posterior spinal inspection/palpation
- Equality of movement, sensation, motor strength
- Posturing, position
- Description of seizure activity and length of seizure
- Reflexes (corneal, gag, cough, babinski)
- BGL
- Tremors, CIWA
- Pain onset, provocation, quality, radiation, source
- Ambulation description

GI/GU:

- Intake, appetite, NPO start time
- Nausea, vomiting, hematemesis
- Pain description, intensity, quality, location, circumstances
- Shoulder blade pain, flank pain
- Abdominal visualization, flat, obese, distended, cachexic
- Bowel sounds, bruits, tympanic
- Abdominal palpation, soft, hard, tenderness, mass, rebound, radiation, guarding
- Bladder/liver/spleen palpable
- Urine output, pain on voiding, urgency, frequency
- Vaginal discharge, bleeding, amount, presence of clots, number of pad changes
- Diarrhea, constipation, melena, flatus
- Foley catheter time of insertion, size, output consistency, amount
- Wounds, dressings, location, condition
- NG, Ostomy, drains, output, amount, consistency, suction

EENT:

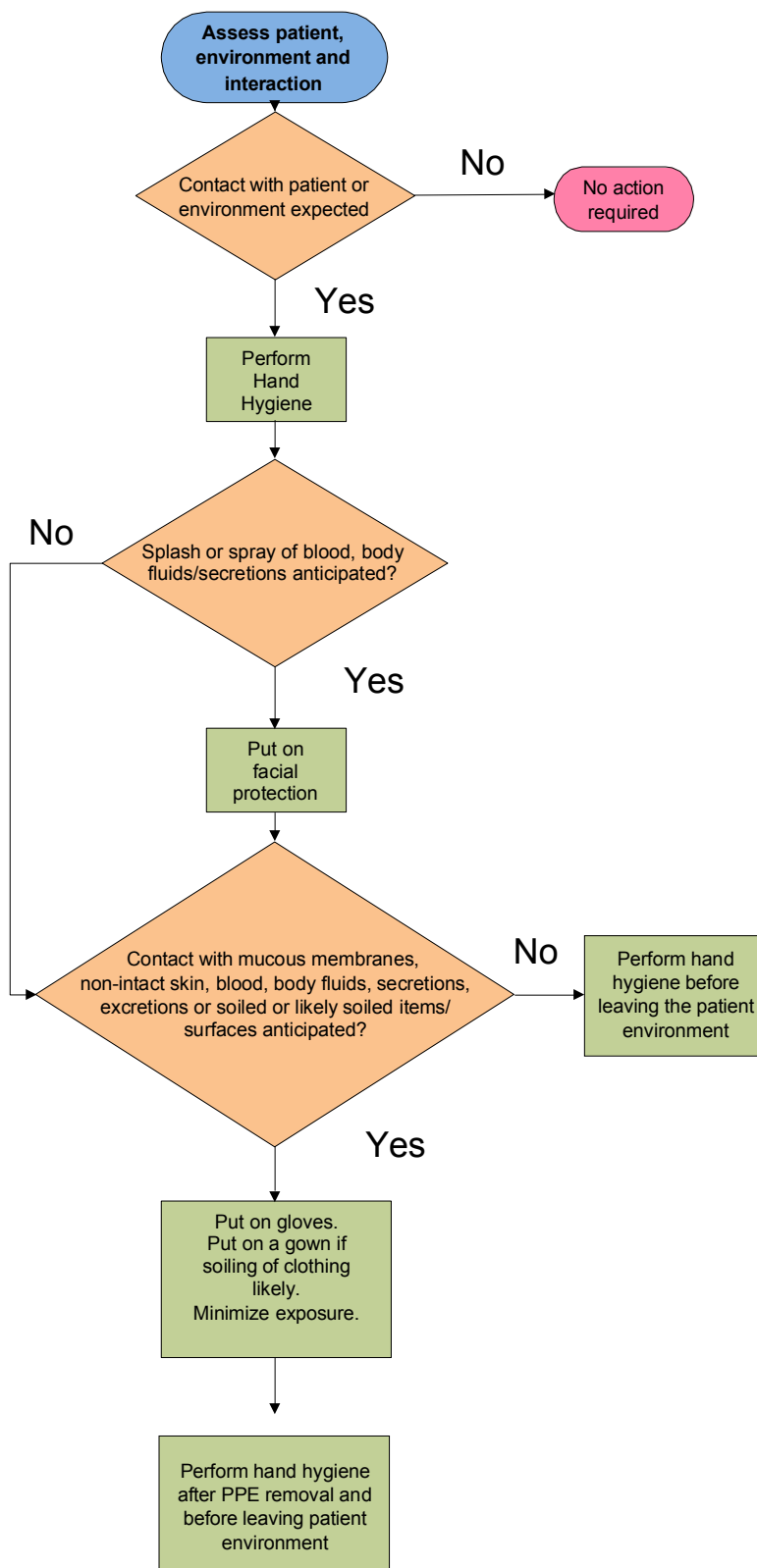
- Visual acuity, blurring, tunnelling, changes
- Hearing changes, ringing, discharge, TM intact
- Nasal congestion, fractures
- Oral swelling, mandibular/maxillary malalignment
- Tonsillar swelling, exudate

MSK/INTEG:

- DCAP-BLS TIC
- Rash, petechial/blanchable, pattern, vesicular, infection prevention
- Burn description, degree, % BSA

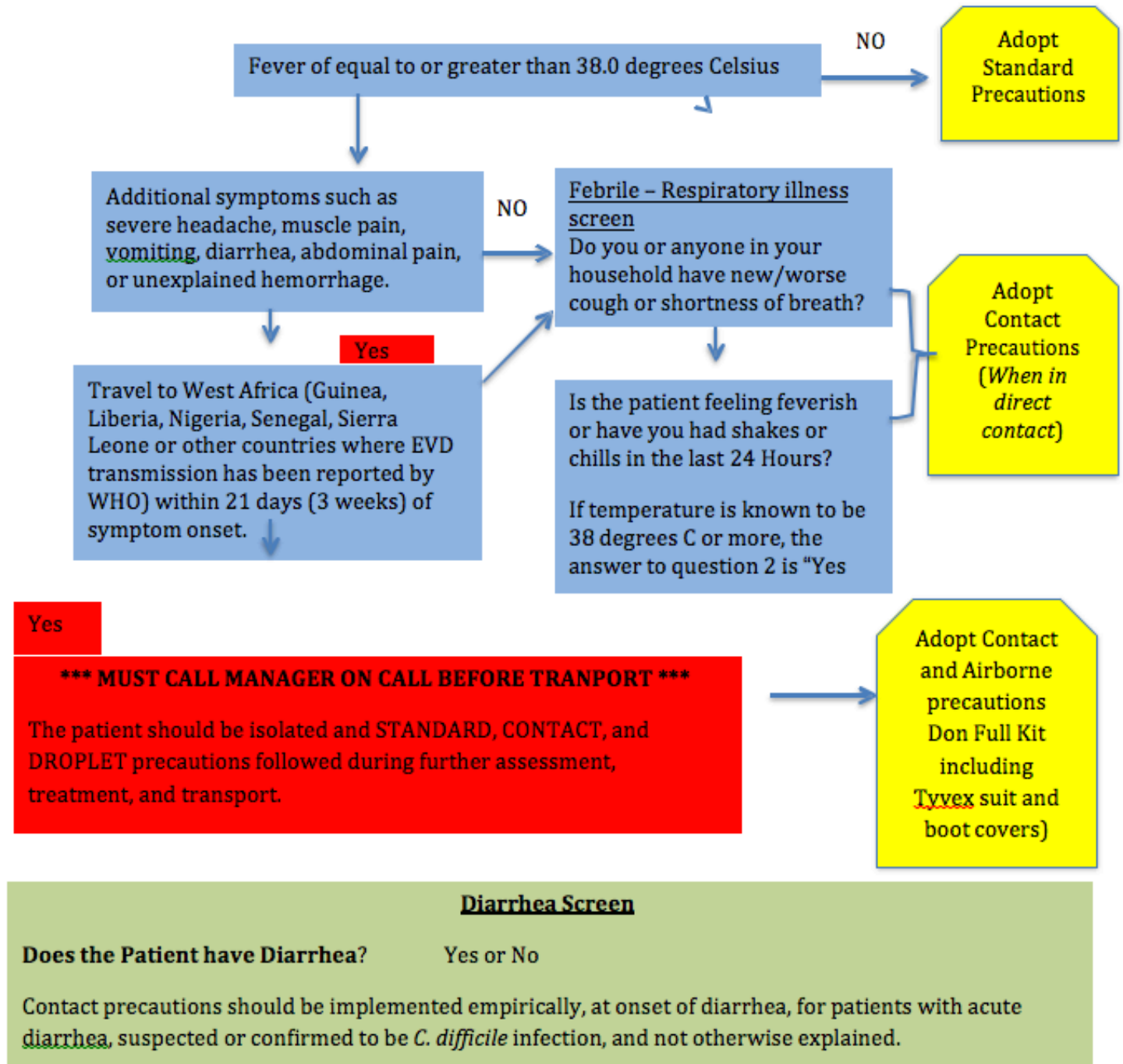
Appendix B – Routine Practices Point of Care Risk Assessment Algorithm
Appropriate Use of Personal Protective Equipment (PPE)

Adapted from PHAC Routine Practices and Additional Precautions Assessment and Educational Tools 2012



Appendix C – Infectious Disease Screening Tool

If any part of the patient history indicates infectious disease process please ask the following questions:





AMS INDUSTRIAL BLS/ALS MEDICATION LIST

Note: Advanced Medical Solutions Medical Director reserves the right to delegate the administration of OTC medications by an EMR with prior consultation and/or standing protocols as identified for a specific remote workplace.

Generic Name	Trade Name	Concentration	Preparation	Classification	EMR	EMT	EMT-P	PA
Acetaminophen	Acephen, Tylenol	500-mg	Tablet	Anti-Pyretic/Non-Opioid Analgesic	-	■	■	■
Acetaminophen / Codeine	Tylenol #3	325-mg/30-mg	Tablet	Anti-Pyretic/Opioid Analgesic	-	■	■	■
Acetaminophen / Phenylephrine / Pheniramine	NeoCitran Extra Strength Cold & Flu	650-mg/10-mg/20-mg	Powder	Allergy, Cold, and Cough Remedies	-	■	■	■
Acetylsalicylic Acid	Aspirin®, Asaphen®	81-mg	Tablet	Anti-Pyretic/Non-Opioid Analgesic	■	■	■	■
Acetylsalicylic Acid	Aspirin®, Asaphen®	325-mg	Tablet	Anti-Pyretic/Non-Opioid Analgesic	-	■	■	■
Activated Charcoal	Charac-50, Charcodote	50-mg	Solution	Antidotes	-	-	■	■
Adenosine	Adenocard	6-mg/2-mL	Injectable	Anti-Arrhythmic	-	-	■	■
Albuterol	Ventolin HFA	90-mcg/spray; 18-gm	HFA	Bronchodilators	-	■	■	■
Albuterol	Salbutamol, Ventolin Nebules	2.5-mg/3-mL	Solution	Bronchodilators	■	■	■	■
Aluminum Hydroxide / Magnesium Carbonate	Gaviscon Extra Strength	160-mg/105-mg	Tablet	Anti-Ulcer/Hypophosphatemic	-	■	■	■
Aluminum Hydroxide / Magnesium Carbonate	Gaviscon Extra Strength Liquid	254-mg/237.5-mg	Solution	Anti-Ulcer/Hypophosphatemic	-	■	■	■
Amiodarone	-	50-mg/mL	Injectable	Anti-Arrhythmic	-	-	■	■
Amoxicillin	Novamoxin®	500-mg	Tablet	Anti-Infective	-	-	-	■
Artificial Tears	-	15-mL	Solution	Ophthalmic	-	■	■	■
Atropine	-	0.1-mg/mL	Injectable	Anti-Arrhythmic	-	-	■	■
Azithromycin	Zithromax®	250-mg	Tablet	Anti-Infective	-	-	-	■
Benzocaine	Orajel® Severe Toothache & Gum	10%	Ointment	-	-	■	■	■
Benztropine	Apo-Benztropine®, Cogentin®	1-mg/mL	Injectable	Anti-Parkinson	-	-	-	■
Calcium Chloride 10%	-	1.36-mEq/mL	Injectable	Mineral and Electrolyte Replacement	-	-	■	■
Camphor / Dimethicone / Menthol / Phenol	Blistex Medicated Lip Balm	0.5%/1.1%/0.6%/0.5%	Ointment	Non-Opioid Analgesics	-	■	■	■
Camphor / Eucalyptus / Menthol / Methyl Salicylate	Rub A535®	1%/0.5%/0.75%/12.5%	Cream	Non-Opioid Analgesics	-	■	■	■
Cefazolin	Ancef®	1-gm	Injectable	Anti-Infective	-	-	-	■
Cefixime	Suprax®	400-mg	Tablet	Anti-Infective	-	-	-	■
Ceftriaxone	Rocephin®	1-gm	Injectable	Anti-Infective	-	-	-	■
Celox	Celox Rapid Gauze, Z-Fold	9-gm	Towelette	Anti-Hemostatic Agent	-	■	■	■
Cephalexin	Keflex®	500-mg	Tablet	Anti-Infective	-	-	-	■
Chlorhexidine Gluconate	Chlorhexidine Wash Cloths	2%	Towelette	Anti-Septic	-	■	■	■
Chlorhexidine Gluconate	Apo-Chlorhexidine Oral Rinse	0.12%	Solution	Anti-Septic	-	■	■	■
Ciprofloxacin	Cipro®, Cipro® XR	500-mg	Tablet	Anti-Infective	-	-	-	■

Generic Name	Trade Name	Concentration	Preparation	Classification	EMR	EMT	EMT-P	PA
Clopidogrel	Plavix®	300-mg	Tablet	Anti-Platelet	-	-	■	■
Clotrimazole	Canesten Anti-Fungal Cream	1%	Ointment	Anti-Fungal	-	■	■	■
DEET	OFF! Deep Woods Sportsmen Insect Repellent	98.25%	Towelette	Insect Repellent	■	■	■	■
Dexamethasone	Decadron	10-mg/mL	Injectable	Anti-Asthmatics	-	-	■	■
Dextromethorphan/Benzocaine	Cepacol Extra Strength Sore Throat & Cough	5-mg/7.5-mg	Lozenge	Allergy, Cold, and Cough Remedies	-	■	■	■
Dextromethorphan / Pseudoephedrine / Guaifenesin / Acetaminophen	Benylin® All-In-One Cold and Flu	15-mg/30-mg/100-mg/500-mg	Tablet	Allergy, Cold, and Cough Remedies	-	■	■	■
Dextromethorphan / Pseudoephedrine / Guaifenesin / Acetaminophen	Benylin® All-In-One Cold and Flu	15-mg/30-mg/100-mg/500-mg	Liquid	Allergy, Cold, and Cough Remedies	-	■	■	■
Dextrose	Insta-Glucose	24-gm	Gel	Nutrient Replenisher	■	■	■	■
Dextrose D5W	-	250-mL	Injectable	Nutrient Replenisher	-	-	-	■
Dextrose D50W	-	0.5-gm/mL	Injectable	Nutrient Replenisher	-	■	■	■
Diazepam	Valium	5-mg/mL	Injectable	Anti-Anxiety/Anti-Convulsants	-	-	■	■
Diltiazem	Cardizem	5-mg/mL	Injectable	Anti-Arrhythmic	-	-	-	■
Dimenhydrinate	Apo-Dimenhydrinate, Gravol	50-mg/mL	Injectable	Anti-Emetics/Anti-Histamines	-	-	■	■
Dimenhydrinate	Gravol	50-mg	Tablet	Anti-Emetics/Anti-Histamines	-	■	■	■
Diphenhydramine	Benadryl®	50-mg/mL	Injectable	Anti-Histamine	-	-	■	■
Diphenhydramine	Benadryl®	50-mg	Tablet	Anti-Histamine	-	■	■	■
Dopamine	Intropin	400-mg/250-mL	Injectable	Inotropic/Vasopressors	-	-	■	■
Docusate Sodium	Colace®	100-mg	Tablet	Laxative	-	■	■	■
Enoxaparin	Lovenox	30-mg/0.3-mL	Injectable	Anti-Thrombotic	-	-	■	■
Epinephrine 1:1,000	Adrenalin, Anapen, EpiPen	0.3-mg/0.3-mL	Injectable	Anti-Asthmatics/Bronchodilators	■	■	■	■
Epinephrine 1:1,000	Adrenalin®	1-mg/mL	Injectable	Anti-Asthmatics/Bronchodilators	-	■	■	■
Epinephrine 1:10,000	Adrenalin®	0.1-mg/mL	Injectable	Vasopressors	-	-	■	■
Eugenol	Oil of Cloves - Emergency Dental Kit	85%	Solution	Anti-Septic/Non-Opioid Analgesic	-	■	■	■
Fentanyl	Sublimaze®	0.05-mg/mL	Injectable	Opioid Analgesic	-	-	■	■
Fluorescein Sodium	Bio-Glo	1.0-mg	Strip	Ophthalmic	-	■	■	■
Fomepizole	Antizol	1-mg/mL	Injectable	Antidote	-	-	■	■
Furosemide	Lasix®	10-mg/mL	Injectable	Diuretics	-	-	■	■
Glucagon	GlucaGen®	1-mg	Injectable	Hormones	-	■	■	■
Haloperidol	Haldol®	5-mg/mL	Injectable	Anti-Psychotics	-	-	■	■
Hepatitis A/Hepatitis B	Twinrix	1-mL	Injectable	Immunizations	-	-	-	■
Hydrocortisone	Anusol-HC	0.5%	Ointment	Anti-Hemorrhoids	-	■	■	■
Ibuprofen	Advil®, Motrin®	200-mg	Tablet	Anti-Pyretic/Non-Opioid Analgesic	-	■	■	■

Generic Name	Trade Name	Concentration	Preparation	Classification	EMR	EMT	EMT-P	PA
Indomethacin	Apo-Indomethacin®, Indocin®	50-mg	Tablet	Anti-Pyretic/Non-Opioid Analgesic	-	-	-	■
Ipratropium Bromide	Atrovent® HFA	7-mcg/spray; 12.9-gm	HFA	Bronchodilators	-	■	■	■
Ipratropium Bromide	Atrovent®	500-mcg	Solution	Bronchodilators	■	■	■	■
Isopropyl Alcohol	Alcohol Swabsticks	70%	Swabstick	Anti-Septic	■	■	■	■
Isopropyl Alcohol	Rubbing Alcohol	70%	Solution	Anti-Septic	■	■	■	■
Ketamine	Ketalar	10-mg/mL	Injectable	Anesthetics	-	-	■	■
Ketorolac	Toradol®	30-mg/mL	Injectable	Non-Opioid Analgesics	-	-	■	■
Labetalol	-	5-mg/mL	Injectable	Anti-Hypertensive	-	-	-	■
Lamivudine / Zidovudine	Combivir	150-mg/300-mg	Tablet	Anti-HIV	-	■	■	■
Levonorgestrel	Plan-B	0.75-mg	Tablet	Emergency Contraceptive	-	■	■	■
Lidocaine 0.5%	Solarcaine Burn Relief Spray	0.5%	Spray	Anesthetics	-	■	■	■
Lidocaine 2%	Xylocaine	20-mL	Injectable	Anesthetics	-	-	■	■
Lidocaine 2% / Epinephrine 1:100,000	Xylocaine	20-mL	Injectable	Anesthetics	-	-	■	■
Lidocaine 10%	Xylocaine Spray	10%	Aerosol	Anesthetics	-	-	■	■
Loperamide	Imodium®	2-mg	Tablet	Anti-Diarrheal	-	■	■	■
Loratadine	Claritin®	10-mg	Tablet	Anti-Histamine	-	■	■	■
Lorazepam	Ativan®	1-mg	Tablet	Anti-Anxiety/Anti-Convulsants	-	-	■	■
Lorazepam	Ativan®	4-mg/mL	Injectable	Anti-Anxiety/Anti-Convulsants	-	-	■	■
Magnesium Sulfate	-	500-mg/mL	Injectable	Mineral and Electrolyte Replacement	-	-	■	■
Mannitol	Osmitol	20%/500-mL	Injectable	Diuretics	-	-	-	■
Metoclopramide	Reglan®	5-mg/mL	Injectable	Anti-Emetics	-	-	■	■
Metoprolol	Betaloc IV®, Lopressor®	1-mg/mL	Injectable	Anti-Anginal/Anti-Hypertensive	-	-	■	■
Midazolam	Versed®	5-mg/mL	Injectable	Anti-Anxiety/Sedative/Hypnotics	-	-	■	■
Morphine	Morphine H.P., MS Contin	10-mg/mL	Injectable	Opioid Analgesic	-	-	■	■
Naloxone	Narcan	0.4-mg/mL	Injectable	Antidotes	-	-	■	■
Nitroglycerin	Nitrolingual, Nitromist	400-mch/spray; 4.9-gm	Spray	Anti-Anginal	-	■	■	■
Nitroglycerin	Nitro-Dur	0.2-mg	Patch	Anti-Anginal	-	■	■	■
Nitrous Oxide	Entonox, Nitronox	Self Administered	Gas	Inhaled Agent	-	■	■	■
Norepinephrine	Lovephed	1-mg/mL	Injectable	Vasopresor	-	-	■	■
Ondansetron	Zofran	2-mg/mL	Injectable	Anti-Emetics	-	-	■	■
Oxygen	-	0.5 – 15 LPM	Gas	Inhaled Agent	■	■	■	■
Oxytocin	Pitocin	10-units/mL	Injectable	Hormones	-	-	■	■
Permethrin	Nix Lice Treatment	1%	Lotion	Pediculicide	-	■	■	■
Permethrin	Nix Dermal Cream	5%	Cream	Pediculicide	-	■	■	■
Phenytoin	Dilantin	50-mg/mL	Injectable	Anti-Convulsants	-	-	-	■

Generic Name	Trade Name	Concentration	Preparation	Classification	EMR	EMT	EMT-P	PA
Phenytoin	Dilantin	50-mg	Tablet	Anti-Convulsants	-	-	-	■
Polymyxin B / Bacitracin	Polysporin Topical Ointment	10,000-units/500-units	Ointment	Anti-Infective	-	■	■	■
Polymyxin B / Trimethoprim	Polytrim Ophthalmic Solution	10,000-units/1-mg	Solution	Anti-Infective	-	■	■	■
Povidone Iodine	Betadine Solution	10%	Solution	Anti-Septic	■	■	■	■
Povidone Iodine	Povidone Iodine Swabsticks	10%	Swabstick	Anti-Septic	■	■	■	■
Pramoxine / Phenylephrine / Glycerin / Petrolatum	Preparation H Cream	1%/0.25%/14.4%/15%	Cream	Anti-Hemorrhoids	-	■	■	■
Pramoxine/Zinc Acetate	Polysporin Itch Relief	1%/0.1%	Ointment	Anti-Histamine	■	■	■	■
Prednisone	Winipred	50-mg	Tablet	Anti-Asthmatics	-	-	■	■
Pseudoephedrine	Sudafed	30-mg	Tablet	Allergy, Cold, and Cough Remedies	-	■	■	■
Ranitidine	Zantac	25-mg/mL	Injectable	Anti-Ulcer	-	-	-	■
Ranitidine	Zantac	150-mg	Tablet	Anti-Ulcer	-	■	■	■
Rocuronium	Zemuron	10-mg/mL	Injectable	Paralytic Agent	-	-	■	■
Silver Sulfadiazine	Flamazine	1%	Cream	Anti-Infective	-	■	■	■
Sodium Bicarbonate 8.4%	-	1-mEq/mL	Injectable	Anti-Ulcer	-	-	■	■
Sodium Biphosphate	Fleet Enema	19-g/7-g	Liquid	Laxative	-	-	■	■
Sodium Chloride	Normal Saline 0.9%	10-mL	Injectable	Mineral and Electrolyte Replacement	-	■	■	■
Sodium Chloride	Normal Saline 0.9%	50-mL	Injectable	Mineral and Electrolyte Replacement	-	■	■	■
Sodium Chloride	Normal Saline 0.9%	500-mL	Injectable	Mineral and Electrolyte Replacement	-	■	■	■
Sodium Chloride	Normal Saline 0.9%	1,000-mL	Injectable	Mineral and Electrolyte Replacement	-	■	■	■
Sterile Water	-	10-mL	Solution	-	-	-	-	■
Sterile Water	-	1,000-mL	Solution	-	-	-	-	■
Succinylcholine	Anectine	20-mg/mL	Injectable	Paralytic Agent	-	-	■	■
Tetanus + Diphtheria Toxoids (Td) Vaccine	-	0.5-mL	Injectable	Immunizations	-	-	-	■
Tetracaine	Altracaine, Tetcaine	0.5%	Solution	Ophthalmic	-	■	■	■
Tobramycin	Tobrex	0.3%	Solution	Ophthalmic	-	-	■	■
Tolnaftate	Tinactin Super Absorbent Powder	1%	Powder	Anti-Fungal	-	■	■	■
Tranexamic Acid	-	100-mg/mL	Injectable	Anti-Fibrotic Agent	-	-	■	■
Tuberculin	Mantoux	5-units	Injectable	Diagnostic Agent	-	-	-	■
Valacyclovir	Valtrex	500-mg	Tablet	Anti-Viral	-	-	-	■
Vasopressin	Pressyn	20-units/mL	Injectable	Hormones	-	-	■	■
Vitamin B1	Thiamine, Betaxin	100-mg/mL	Injectable	Vitamins	-	-	■	■
Witch Hazel 50%	Preparation H Totables	50%	Towelette	Anti-Hemorrhoids	-	■	■	■
Xylometazoline	Otrivin Complete Nasal Care	0.1%	Spray	Allergy, Cold, and Cough Remedies	-	■	■	■